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THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A metal connector for use in the fabrication of structural I-beams having upper and lower flanges in which
5 each flange includes a pair of timber members, the connector having two spatially separated attachment sections that can be located between the timber members of each flange, wherein at least one of the attachment sections has a plurality of spikes projecting outwardly
10 from opposite sides that are capable of piercing and fastening one pair of timber members to the connector to form one of the flanges of the beam.
2. A metal connector according to claim 1, wherein
15 each attachment section has spikes projecting outwardly from each side for piercing and fastening pairs of timber members thereto in the form of an I-beam.
3. The metal connector according to claim 1 or 2,
20 wherein the spikes are provided by tabs made in the attachment section(s) and interconnected thereto by interconnecting portions, the interconnecting portions being bent so that the tabs project outwardly.
- 25 4. The metal connector according to claim 3, whereby in order to prevent deformation of the attachment section(s) during attachment of the timber members to the spikes, the interconnecting portion of a majority of the spikes projecting outwardly from one side of the
30 attachment section(s) are located adjacent to the interconnecting portion of spikes that project outwardly from the opposite side of the attachment section(s).
5. The metal connector according to claim 4, wherein
35 the spikes projecting from opposite sides of the attachment section(s) have adjacent interconnecting portions that are separated by a spacing that ranges from

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3 to 15mm.

6. The metal connector according to claim 5, wherein the spacing between adjacent interconnecting portions of spikes projecting in opposite directions ranges from 4 to 8mm.
7. The metal connector according to claim 5, wherein adjacent interconnecting portions be separated by spaces that are equal to or less than the length of the spikes projecting from the attachment section(s).
8. The metal connector according to any one of the preceding claims, wherein the spikes be arranged in rows and ranks on the attachment section(s), and that adjacent interconnecting portions of the spikes projecting from opposite sides of the attachment section(s) be in different ranks.
9. The metal connector according to claim 8, wherein the ranks be arranged diagonally across the attachment section(s) such that the interconnecting portions of the spikes in one rank be located adjacent to the interconnecting portion of the spikes in another rank.
10. The metal connector according to claim 8 or 9, wherein the rows or ranks be defined by a plurality of pairs of spikes projecting outwardly from one side of the attachment section(s).
11. The metal connector according to claim 10, wherein the ranks are defined by pairs of spikes projecting from one side of the attachment section(s) and adjacent ranks have pairs of spikes projecting outwardly from opposite sides of the attachment section(s).
12. The metal connector according to any one of the

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preceding claims, wherein the length of the spikes ranges from 3 to 15mm.

13. The metal connector according to any one of the
5 preceding claims, wherein the length of the spikes ranges from 5 to 9mm.

14. The metal connector according to any one of the
preceding claims, wherein the spikes have means for
10 preventing timber once attached to the spikes from becoming separated or detached from the spikes.

15. The metal connector according to claim 14, wherein
the means for preventing the timber from separating from
15 the spikes include the spikes being twisted about an axis lateral to the attachment section(s).

16. An I-beam including:
a) upper and lower flanges that each include a pair
20 of timber members; and
b) the metal connector according to any one of the preceding claims,
wherein one pair of timber members is located on each
attachment section(s) of the metal connector to form the
25 flanges of the I-beam.

17. A method of making an I-beam including the
connector according to any one of claims 1 to 15, wherein
the method including the steps of:
30 a) positioning the connector into a pressing station;
b) positioning a pair of timber members either side
of at least one attachment section(s) having spikes
projecting from opposite sides; and
c) simultaneously pressing the timber members onto
35 the spikes so as to form an upper or lower flange of an I-beam.

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18. The method according to claim 17, wherein a further pair of timber members are fixed to the connector in the pressing station or an additional pressing station to form the other flange of the I-beam.

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19. A method of making an I-beam including the connector according to any one of claims 1 to 15, wherein, the method includes the steps of:

- 10 a) positioning the connector in a pressing station having a female template that receives the spikes on one side of the connector;
- b) positioning and pressing a timber member onto the spikes projecting from the other side of the connector;
- c) releasing the spikes from the female template; and
- 15 d) positioning and pressing a further timber member onto the spikes previously received by the female template so as to form a flange of an I-beam.